IN THE ABSTRACT

Replace the abstract with:

Abstract

A system for processing stereo matching of a video image sequence in a real-time mode. The system includes a signal converter for converting an image input from a first camera and a second camera into a digital signal; and an image matching chip for calculating a determined matching cost based on a pair of pixels in one scan line of the first and second digital image signals, tracing the decision value which determines the minimum matching cost, and outputting the decided value as an estimated disparity according to determined activation information; and a display for displaying the output from the image matching. According to the system, real-time stereo matching is enabled by parallel processing or video image sequences using an algorithm which is based on a new dynamic trellis based method and is optimal in the Bayesian sense.